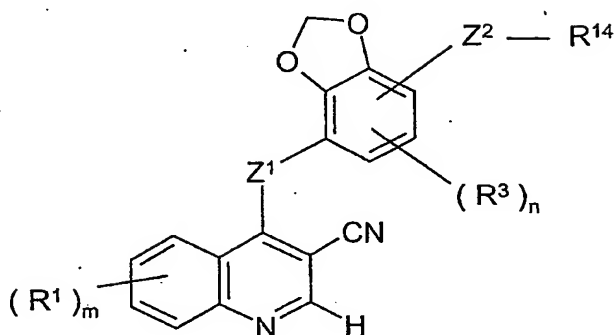


CLAIMS

1. A quinoline derivative of the Formula I

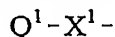


I

wherein Z^1 is an O, S, SO, SO₂, N(R²) or C(R²)₂ group, wherein each R² group, which may be the same or different, is hydrogen or (1-6C)alkyl;

10 m is 0, 1, 2, 3 or 4;

each R¹ group, which may be the same or different, is selected from halogeno, trifluoromethyl, cyano, isocyano, nitro, hydroxy, mercapto, amino, formyl, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, (3-6C)alkenoylamino, N-(1-6C)alkyl-(3-6C)alkenoylamino, (3-6C)alkynoylamino, N-(1-6C)alkyl-(3-6C)alkynoylamino, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula :



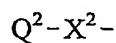
wherein X¹ is a direct bond or is selected from O, S, SO, SO₂, N(R⁴), CO, CH(OR⁴), CON(R⁴), N(R⁴)CO, SO₂N(R⁴), N(R⁴)SO₂, OC(R⁴)₂, SC(R⁴)₂ and N(R⁴)C(R⁴)₂, wherein R⁴ is hydrogen or (1-6C)alkyl, and Q¹ is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, (3-7C)cycloalkyl-
 25 (1-6C)alkyl, (3-7C)cycloalkenyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl, or (R¹)_m is (1-3C)alkylenedioxy,

BEST AVAILABLE COPY

and wherein adjacent carbon atoms in any (2-6C)alkylene chain within a R^1 substituent are optionally separated by the insertion into the chain of a group selected from O, S, SO, SO₂, N(R⁵), CO, CH(OR⁵), CON(R⁵), N(R⁵)CO, SO₂N(R⁵), N(R⁵)SO₂, CH=CH and C≡C wherein R⁵ is hydrogen or (1-6C)alkyl or, when the inserted group is N(R⁵), R⁵ may also be

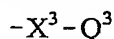
5 (2-6C)alkanoyl,

and wherein any CH₂=CH- or HC≡C- group within a R^1 substituent optionally bears at the terminal CH₂= or HC≡ position a substituent selected from halogeno, carboxy, carbamoyl, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl or from
10 a group of the formula :



wherein X² is a direct bond or is selected from CO and N(R⁶)CO, wherein R⁶ is hydrogen or (1-6C)alkyl, and Q² is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

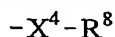
15 and wherein any CH, CH₂ or CH₃ group within a R^1 substituent optionally bears on each said CH, CH₂ or CH₃ group one or more halogeno or (1-6C)alkyl substituents or a substituent selected from hydroxy, cyano, amino, carboxy, carbamoyl, (1-6C)alkoxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl,
20 N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula :



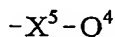
25 wherein X³ is a direct bond or is selected from O, S, SO, SO₂, N(R⁷), CO, CH(OR⁷), CON(R⁷), N(R⁷)CO, SO₂N(R⁷), N(R⁷)SO₂, C(R⁷)₂O, C(R⁷)₂S and N(R⁷)C(R⁷)₂, wherein R⁷ is hydrogen or (1-6C)alkyl, and Q³ is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

30 and wherein any aryl, heteroaryl or heterocyclyl group within a substituent on R^1 optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from halogeno, trifluoromethyl, cyano, nitro, hydroxy, amino, carboxy, carbamoyl, (1-6C)alkyl,

(2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, 5 N-(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula :



wherein X^4 is a direct bond or is selected from O and N(R^9), wherein R^9 is hydrogen or 10 (1-6C)alkyl, and R^8 is halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl or (1-6C)alkoxycarbonylamino-(1-6C)alkyl or from a group of the formula :

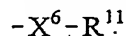


15 wherein X^5 is a direct bond or is selected from O, N(R^{10}) and CO, wherein R^{10} is hydrogen or (1-6C)alkyl, and Q^4 is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl which optionally bears 1 or 2 substituents, which may be the same or different, selected from halogeno, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl and (1-6C)alkoxy,

20 and wherein any heterocyclyl group within a substituent on R^1 optionally bears 1 or 2 oxo or thioxo substituents;

n is 0, 1, 2 or 3;

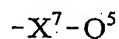
each R^3 group is halogeno, trifluoromethyl, cyano, nitro, hydroxy, amino, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, 25 (2-6C)alkynyloxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, (3-6C)alkenoylamino, N-(1-6C)alkyl-(3-6C)alkenoylamino, (3-6C)alkynoylamino, N-(1-6C)alkyl-(3-6C)alkynoylamino, 30 N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula :



wherein X^6 is a direct bond or is selected from O and $N(R^{12})$, wherein R^{12} is hydrogen or (1-6C)alkyl, and R^{11} is halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl or di-[(1-6C)alkyl]amino-(1-6C)alkyl;

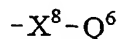
- 5 Z^2 is a $C\equiv C$ or $C(R^{13})=C(R^{13})$ group, wherein each R^{13} group, which may be the same or different, is hydrogen or (1-6C)alkyl; and

R^{14} is selected from halogeno, cyano, isocyano, formyl, carboxy, carbamoyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl, halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl, (1-6C)alkoxycarbonylamino-(1-6C)alkyl or from a group of the formula :



- 15 wherein X^7 is a direct bond or is selected from CO, $CH(OR^{15})$, $CON(R^{15})$ or $SO_2N(R^{15})$, wherein R^{15} is hydrogen or (1-6C)alkyl, and Q^5 is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, (3-7C)cycloalkyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

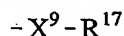
and wherein any CH, CH_2 or CH_3 group within a R^{14} substituent optionally bears on
20 each said CH, CH_2 or CH_3 group one or more halogeno or (1-6C)alkyl substituents or a substituent selected from hydroxy, cyano, amino, carboxy, carbamoyl, (1-6C)alkoxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]-sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-(1-6C)alkanesulphonylamino or
25 from a group of the formula :



- wherein X^8 is a direct bond or is selected from O, S, SO, SO_2 , $N(R^{16})$, CO, $CH(OR^{16})$,
30 $CON(R^{16})$, $N(R^{16})CO$, $SO_2N(R^{16})$, $N(R^{16})SO_2$, $C(R^{16})_2O$, $C(R^{16})_2S$ and $N(R^{16})C(R^{16})_2$, wherein R^{16} is hydrogen or (1-6C)alkyl, and Q^6 is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

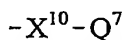
and wherein any aryl, heteroaryl or heterocyclyl group within a substituent on R¹⁴ optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from halogeno, trifluoromethyl, cyano, nitro, hydroxy, amino, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]-sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-

10 (1-6C)alkanesulphonylamino or from a group of the formula :



wherein X⁹ is a direct bond or is selected from O and N(R¹⁸), wherein R¹⁸ is hydrogen or (1-6C)alkyl, and R¹⁷ is halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-

15 (1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl, (1-6C)alkoxycarbonylamino-(1-6C)alkyl, or from a group of the formula :



wherein X¹⁰ is a direct bond or is selected from O, N(R¹⁹) and CO, wherein R¹⁹ is hydrogen or (1-6C)alkyl, and Q⁷ is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl which optionally bears 1 or 2 substituents, which may be the same or different, selected from halogeno, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl and (1-6C)alkoxy,

20 or heterocyclyl-(1-6C)alkyl which optionally bears 1 or 2 substituents, which may be the same or different, selected from halogeno, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl and (1-6C)alkoxy,

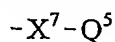
and wherein any heterocyclyl group within a substituent on R¹⁴ optionally bears 1 or 2 oxo or thioxo substituents;

25 or a pharmaceutically-acceptable salt thereof.

2. A quinoline derivative of the Formula I, or a pharmaceutically acceptable salt thereof, according to claim 1 wherein R¹, R³, Z¹, Z², m and n have any of the meanings defined in claim 1 and

30 R¹⁴ is selected from cyano, formyl, carboxy, carbamoyl, methoxycarbonyl, vinyl, ethoxycarbonyl, N-methylcarbamoyl, N-ethylcarbamoyl, N,N-dimethylcarbamoyl, N-ethyl-N-methylcarbamoyl, N,N-diethylcarbamoyl, acetyl, propionyl, chloromethyl,

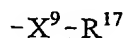
2-chloroethyl, 3-chloropropyl, hydroxymethyl, 2-hydroxyethyl, 3-hydroxypropyl, methoxymethyl, 2-methoxyethyl, 3-methoxypropyl or from a group of the formula :



wherein X^7 is a direct bond or CO and Q^5 is pyridin-2-yl, 1-pyrrolidinyl, morpholino, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl, piperidino, 1-homopiperidinyl, piperazin-1-yl, homopiperazin-1-yl, 1-pyrrolidinylmethyl, morpholinomethyl, piperidinomethyl, 1-homopiperidinylmethyl, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylmethyl, piperazin-1-ylmethyl, homopiperazin-1-ylmethyl or 3-morpholinopropyl,

and wherein any CH_2 or CH_3 group within a R^{14} substituent optionally bears on each said CH_2 or CH_3 group one or more fluoro, chloro or methyl groups or a substituent selected from hydroxy, amino, methoxy, methylamino, dimethylamino, acetoxy, acetamido and N-methylacetamido,

and wherein any heteroaryl or heterocyclyl group within a substituent on R^{14} optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from hydroxy, amino, carbamoyl, methyl, ethyl, allyl, 2-propynyl, methoxy, methylsulphonyl, N-methylcarbamoyl, N,N-dimethylcarbamoyl and acetyl, or optionally bears 1 substituent selected from a group of the formula :



wherein X^9 is a direct bond and R^{17} is 2-fluoroethyl, 2-hydroxyethyl, 3-hydroxypropyl, 2-methoxyethyl, 3-methoxypropyl, cyanomethyl, aminomethyl, methylaminomethyl, dimethylaminomethyl, acetamidomethyl, methoxycarbonylaminomethyl, ethoxycarbonylaminomethyl or tert-butoxycarbonylaminomethyl,

and wherein any heterocyclyl group within a substituent on R^{14} optionally bears 1 or 2 oxo substituents.

3. A quinoline derivative of the Formula I according to claim 1 wherein :

Z^1 is O or NH;

m is 1 and the R^1 group is located at the 5-, 6- or 7-position or m is 2 and each R^1

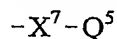
group, which may be the same or different, is located at the 5- and 7-positions or at the 6- and 7-positions and R^1 is selected from hydroxy, amino, methyl, ethyl, propyl, butyl, methoxy, ethoxy, propoxy, isopropoxy, butoxy, pent-4-ynyloxy, hex-5-ynyloxy, methylamino, ethylamino, dimethylamino, diethylamino, acetamido, propionamido, 2-imidazol-1-ylethoxy,

- 2-(1,2,4-triazol-1-yl)ethoxy, tetrahydrofuran-3-yloxy, tetrahydropyran-4-yloxy,
 2-pyrrolidin-1-ylethoxy, 3-pyrrolidin-1-ylpropoxy, 4-pyrrolidin-1-ylbutoxy,
 pyrrolidin-3-yloxy, pyrrolidin-2-ylmethoxy, 2-pyrrolidin-2-ylethoxy,
 3-pyrrolidin-2-ylpropoxy, 2-morpholinoethoxy, 3-morpholinopropoxy, 4-morpholinobutoxy,
 5 2-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)ethoxy, 3-(1,1-dioxotetrahydro-
 4H-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy, 3-piperidinopropoxy, 4-piperidinobutoxy,
 piperidin-3-yloxy, piperidin-4-yloxy, piperidin-3-ylmethoxy, piperidin-4-ylmethoxy,
 2-piperidin-3-ylethoxy, 3-piperidin-3-ylpropoxy, 2-piperidin-4-ylethoxy,
 3-piperidin-4-ylpropoxy, 2-homopiperidin-1-ylethoxy, 3-homopiperidin-1-ylpropoxy,
 10 2-piperazin-1-ylethoxy, 3-piperazin-1-ylpropoxy, 4-piperazin-1-ylbutoxy,
 2-homopiperazin-1-ylethoxy and 3-homopiperazin-1-ylpropoxy,
 and wherein adjacent carbon atoms in any (2-6C)alkylene chain within a R¹ substituent
 are optionally separated by the insertion into the chain of a group selected from O, NH,
 N(Me), CH=CH and C≡C,
- 15 and wherein any CH₂ or CH₃ group within a R¹ substituent optionally bears on each
 said CH₂ or CH₃ group one or more fluoro or chloro groups or a substituent selected from
 hydroxy, amino, methoxy, methylsulphonyl, methylamino, dimethylamino, diethylamino,
 N-ethyl-N-methylamino, N-isopropyl-N-methylamino, N-methyl-N-propylamino and acetoxy,
 and wherein any heteroaryl or heterocyclyl group within a substituent on R¹ optionally
 20 bears 1 or 2 substituents, which may be the same or different, selected from fluoro, chloro,
 trifluoromethyl, hydroxy, amino, carbamoyl, methyl, ethyl, methoxy, N-methylcarbamoyl and
 N,N-dimethylcarbamoyl and a pyrrolidin-2-yl, piperidin-3-yl, piperidin-4-yl, piperazin-1-yl or
 homopiperazin-1-yl group within a R¹ substituent is optionally N-substituted with allyl,
 methylsulphonyl, acetyl, 2-fluoroethyl, 3-fluoropropyl, 2-methoxyethyl, 3-methoxypropyl,
 25 cyanomethyl, 2-aminoethyl, 3-aminopropyl, 2-methylaminoethyl, 3-methylaminopropyl,
 2-dimethylaminoethyl, 3-dimethylaminopropyl, 2-pyrrolidin-1-ylethyl,
 3-pyrrolidin-1-ylpropyl, 2-morpholinoethyl, 3-morpholinopropyl, 2-piperidinoethyl,
 3-piperidinopropyl, 2-piperazin-1-ylethyl or 3-piperazin-1-ylpropyl, the last 8 of which
 substituents each optionally bears 1 or 2 substituents, which may be the same or different,
 30 selected from fluoro, chloro, methyl and methoxy,
 and wherein any heterocyclyl group within a substituent on R¹ optionally bears 1 or 2
 oxo substituents;

n is 0 or 1 and the R³ group, if present, is located at the 5- or 6-position of the 1,3-benzodioxol-4-yl group and is selected from fluoro, chloro, bromo, trifluoromethyl, cyano, hydroxy, methyl, ethyl, vinyl, allyl, ethynyl, methoxy and ethoxy;

Z² is a C≡C or CH=CH group; and

5 R¹⁴ is selected from cyano, formyl, carboxy, carbamoyl, methoxycarbonyl, vinyl, ethoxycarbonyl, N-methylcarbamoyl, N-ethylcarbamoyl, N,N-dimethylcarbamoyl, N-ethyl-N-methylcarbamoyl, N,N-diethylcarbamoyl, acetyl, propionyl, chloromethyl, 2-chloroethyl, 3-chloropropyl, hydroxymethyl, 2-hydroxyethyl, 3-hydroxypropyl, methoxymethyl, 2-methoxyethyl, 3-methoxypropyl, cyanomethyl, 2-cyanoethyl, 10 3-cyanopropyl, methylaminomethyl, ethylaminomethyl, 2-methylaminoethyl, 3-methylaminopropyl, 2-ethylaminoethyl, 3-ethylaminopropyl, dimethylaminomethyl, 2-dimethylaminoethyl, 3-dimethylaminopropyl, acetamidomethyl, 2-acetamidoethyl and 3-acetamidopropyl, or from a group of the formula :



15 wherein X⁷ is a direct bond or CO and Q⁵ is pyridin-2-yl, 1-pyrrolidinyl, morpholino, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl, piperidino, 1-homopiperidinyl, piperazin-1-yl, homopiperazin-1-yl, 1-pyrrolidinylmethyl, morpholinomethyl, piperidinomethyl, 1-homopiperidinylmethyl, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylmethyl, piperazin-1-ylmethyl, homopiperazin-1-ylmethyl or 3-morpholinopropyl,

20 and wherein any CH₂ or CH₃ group within a R¹⁴ substituent optionally bears on each said CH₂ or CH₃ group one or more fluoro, chloro or methyl groups or a substituent selected from hydroxy, amino, methoxy, methylamino, dimethylamino, acetoxy, acetamido and N-methylacetamido,

and wherein any heteroaryl or heterocyclyl group within a substituent on R¹⁴ optionally 25 bears 1, 2 or 3 substituents, which may be the same or different, selected from hydroxy, amino, carbamoyl, methyl, ethyl, allyl, 2-propynyl, methoxy, methylsulphonyl, N-methylcarbamoyl, N,N-dimethylcarbamoyl and acetyl, or optionally bears 1 substituent selected from a group of the formula :

30
$$-X^9-R^{17}$$

wherein X⁹ is a direct bond and R¹⁷ is 2-hydroxyethyl, 3-hydroxypropyl, 2-methoxyethyl, 3-methoxypropyl, cyanomethyl, aminomethyl, methylaminomethyl, dimethylaminomethyl,

acetamidomethyl, methoxycarbonylaminomethyl, ethoxycarbonylaminomethyl or tert-butoxycarbonylaminomethyl,

and wherein any heterocyclyl group within a substituent on R¹⁴ optionally bears 1 or 2 oxo substituents;

5 or a pharmaceutically-acceptable acid-addition salt thereof.

4. A quinoline derivative of the Formula I, or a pharmaceutically acceptable salt thereof, according to claim 1 wherein R¹, R³, R¹⁴, Z², m and n have any of the meanings defined in claim 1 and Z¹ is NH.

10

5. A quinoline derivative of the Formula I, or a pharmaceutically acceptable salt thereof, according to claim 1 wherein R¹, R³, R¹⁴, Z¹, m and n have any of the meanings defined in claim 1 and Z² is a C≡C group.

15 6. A quinoline derivative of the Formula I, or a pharmaceutically acceptable salt thereof, according to claim 1 wherein R¹, R³, R¹⁴, Z¹, Z², m and n have any of the meanings defined in claim 1 and the Z²-R¹⁴ group is located at the 7-position on the 1,3-benzodioxol-4-yl group.

7. A quinoline derivative of the Formula I according to claim 1 wherein :

20 Z¹ is NH;

m is 2 and the first R¹ group is a 6-methoxy group and the second R¹ group is located at the 7-position and is selected from methoxy, ethoxy, 2-fluoroethoxy, 2-chloroethoxy, 3-fluoropropoxy, 3-chloropropoxy, 2-(2-chloroethoxy)ethoxy, 2-(2-methoxyethoxy)ethoxy, 2-pyrrolidin-1-ylethoxy, 3-pyrrolidin-1-ylpropoxy, 2-morpholinoethoxy, 25 3-morpholinopropoxy, 2-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)ethoxy, 3-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy, 3-piperidinopropoxy, 2-(4-methylpiperazin-1-yl)ethoxy, 3-(4-methylpiperazin-1-yl)propoxy, 3-(4-allylpiperazin-1-yl)propoxy, 3-(4-methylsulphonylpiperazin-1-yl)propoxy, 3-(4-acetylpiperazin-1-yl)propoxy, 2-(4-cyanomethylpiperazin-1-yl)ethoxy, 30 3-(4-cyanomethylpiperazin-1-yl)propoxy, 2-[4-(2-fluoroethyl)piperazin-1-yl]ethoxy, 3-[4-(2-fluoroethyl)piperazin-1-yl]propoxy, 2-(3-oxopiperazin-1-yl)ethoxy, 3-(3-oxopiperazin-1-yl)propoxy, 2-(2-pyrrolidin-1-ylethoxy)ethoxy and 2-fluoro-3-(4-hydroxypiperidin-1-yl)propoxy;

n is 0 or n is 1 and R³ is a fluoro or chloro group located at the 5-position of the 1,3-benzodioxol-4-yl group;

the -Z²-R¹⁴ group is located at the 7-position on the 1,3-benzodioxol-4-yl group,

Z² is a C≡C group; and

5 R¹⁴ is selected from vinyl, hydroxymethyl, methoxymethyl, dimethylaminomethyl, pyridin-2-yl, 1-pyrrolidinylmethyl, morpholinomethyl, piperidinomethyl, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylmethyl and piperazin-1-ylmethyl;

or a pharmaceutically-acceptable acid-addition salt thereof.

10 8. A quinoline derivative of the Formula I according to claim 1 wherein

Z¹ is NH;

m is 2 and the first R¹ group is located at the 5-position and is selected from

N-methylpiperidin-4-yloxy and tetrahydro-2H-pyran-4-yloxy and the second R¹ group is located at the 7-position and is selected from methoxy and 3-morpholinopropoxy,

15 n is 0 or n is 1 and R³ is located at the 5-position of the

1,3-benzodioxol-4-yl group and is a chloro group;

the -Z²-R¹⁴ group is located at the 7-position on the 1,3-benzodioxol-4-yl group,

Z² is a C≡C group; and

R¹⁴ is selected from methoxymethyl and 2-methoxyethyl;

20 or a pharmaceutically-acceptable acid-addition salt thereof.

9. A quinoline derivative of the Formula I according to claim 1 and selected from 7-[3-(4-acetylpiperazin-1-yl)propoxy]-3-cyano-6-methoxy-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;

25 3-cyano-6,7-dimethoxy-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;

3-cyano-6,7-dimethoxy-4-[6-chloro-4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;

3-cyano-7-ethoxy-6-methoxy-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;

30 3-cyano-7-{3-[4-(2-fluoroethyl)piperazin-1-yl]propoxy}-6-methoxy-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;

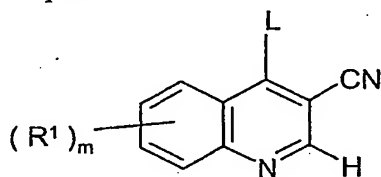
3-cyano-6-methoxy-7-[3-(4-methylpiperazin-1-yl)propoxy]-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;

- 3-cyano-6-methoxy-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]-7-[3-morpholinopropoxy]quinoline;
- 4-[6-chloro-4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]-3-cyano-6-methoxy-7-[3-morpholinopropoxy]quinoline;
- 5 3-cyano-7-[3-(1,1-dioxotetrahydro-4H-thiazin-4-yl)propoxy]-6-methoxy-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;
- 3-cyano-7-(2-fluoroethoxy)-6-methoxy-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;
- 3-cyano-6-methoxy-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]-7-[3-(3-oxopiperazin-1-yl)propoxy]quinoline;
- 10 3-cyano-6-methoxy-4-[6-chloro-4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]-7-[3-(3-oxopiperazin-1-yl)propoxy]quinoline;
- 3-cyano-6-methoxy-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]-7-[2-(2-pyrrolidin-1-ylethoxy)ethoxy]quinoline;
- 15 3-cyano-6-methoxy-7-[2-(2-methoxyethoxy)ethoxy]-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;
- 3-cyano-4-[6-chloro-4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]-7-methoxy-5-[(1-methylpiperidin-4-yl)oxy]quinoline;
- 3-cyano-7-methoxy-5-[(1-methylpiperidin-4-yl)oxy]-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;
- 20 3-cyano-7-(3-morpholin-4-ylpropoxy)-5-(tetrahydro-2H-pyran-4-yloxy)-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;
- 3-cyano-7-methoxy-4-[4-(4-methoxybut-1-ynyl)-2,3-methylenedioxyanilino]-5-[(1-methylpiperidin-4-yl)oxy]quinoline;
- 25 4-[(4-but-3-en-1-ynyl)-2,3-methylenedioxy]anilino]-3-cyano-7-methoxy-5-[(1-methylpiperidin-4-yl)oxy]quinoline;
- 3-cyano-6-methoxy-7-[3-(4-methylpiperazin-1-yl)propoxy]-4-[6-fluoro-4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;
- 3-cyano-6-methoxy-7-[2-fluoro-3-(4-hydroxypiperidin-1-yl)propoxy]-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline;
- 30 1-ynyl)-2,3-methylenedioxyanilino]quinoline;
- 3-cyano-6-methoxy-7-[3-(4-methylpiperazin-1-yl)propoxy]-4-[4-(3-methoxyprop-1-ynyl)-2,3-methylenedioxyanilino]quinoline; and
- 3-cyano-6,7-dimethoxy-4-[4-(pyridin-2-ylethynyl)-2,3-methylenedioxyanilino]quinoline,

or a pharmaceutically acceptable acid addition salt thereof.

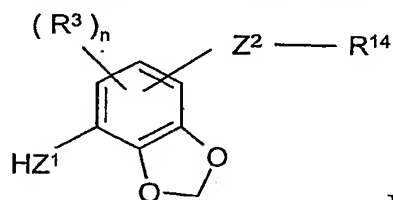
10.. A process for the preparation of a quinoline derivative of the Formula I, or a pharmaceutically-acceptable salt thereof, according to claim 1 which comprises:-

- 5 (a) for the production of those compounds of the Formula I wherein Z^1 is an O, S or $N(R^2)$ group, the reaction of a quinoline of the Formula II



II

wherein L is a displaceable group and m and R^1 have any of the meanings defined in claim 1 except that any functional group is protected if necessary, with a compound of the Formula III

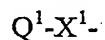


III

10

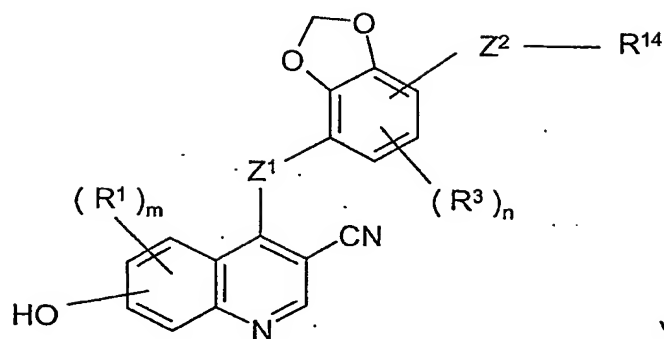
wherein Z^1 is O, S, or $N(R^2)$ and n, R^3 , R^2 , Z^2 and R^{14} have any of the meanings defined in claim 1 except that any functional group is protected if necessary, whereafter any protecting
15 group that is present is removed by conventional means;

- (b) for the production of those compounds of the Formula I wherein at least one R^1 group is a group of the formula

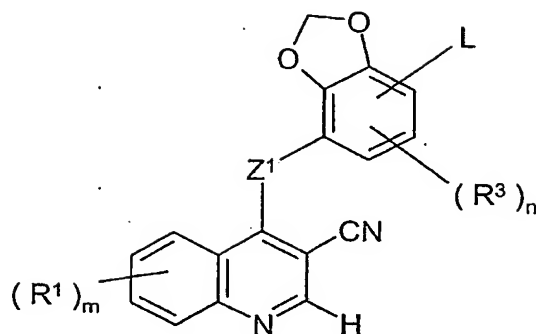


wherein Q^1 is an aryl-(1-6C)alkyl, (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl-

- 20 (1-6C)alkyl, heteroaryl-(1-6C)alkyl or heterocyclyl-(1-6C)alkyl group or an optionally substituted alkyl group and X^1 is an oxygen atom, the coupling, conveniently in the presence of a suitable dehydrating agent, of a quinoline of the Formula V

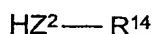


- wherein m , R^1 , Z^1 , n , R^3 , Z^2 and R^{14} have any of the meanings defined in claim 1 except that any functional group is protected if necessary, with an appropriate alcohol of the formula Q^1-OH wherein any functional group is protected if necessary, whereafter any protecting group
- 5 that is present is removed by conventional means;
- (c) for the production of those compounds of the Formula I wherein R^1 is an amino-substituted (1-6C)alkoxy group, the reaction of a compound of the Formula I wherein R^1 is a halogeno-substituted (1-6C)alkoxy group with a heterocyclyl compound or an appropriate amine;
- 10 (d) for the production of those compounds of the Formula I wherein an R^1 group contains a (1-6C)alkoxy or substituted (1-6C)alkoxy group or a (1-6C)alkylamino or substituted (1-6C)alkylamino group, the alkylation, conveniently in the presence of a suitable base of a quinoline derivative of the Formula I, wherein the R^1 group contains a hydroxy group or a primary or secondary amino group;
- 15 (e) for the production of those compounds of the Formula I wherein Z^1 is a SO or SO_2 group, wherein an R^1 or R^3 substituent is a (1-6C)alkylsulphinyl or (1-6C)alkylsulphonyl group or wherein an R^1 , R^3 or R^{14} substituent contains a SO or SO_2 group, the oxidation of a compound of Formula I wherein Z^1 is a S group or wherein an R^1 or R^3 substituent is a (1-6C)alkylthio group or wherein an R^1 , R^3 or R^{14} substituent contains a S group;
- 20 (f) the reaction of a compound of the Formula VI



VI

wherein L is a displaceable group and m, R¹, Z¹, n and R³ have any of the meanings defined in claim 1 except that any functional group is protected if necessary, with a compound of the Formula VII



VII

wherein Z² is a C≡C or C(R¹³)=C(R¹³) group and R¹³ and R¹⁴ have any of the meanings defined in claim 1 except that any functional group is protected if necessary, whereafter any protecting group that is present is removed by conventional means;

- (g) for the production of a compound of the Formula I wherein R¹⁴ is a carboxy group, the cleavage of a compound of the Formula I wherein R¹⁴ is a (1-6C)alkoxycarbonyl group;
- (h) the reaction of a compound of the Formula I wherein R¹⁴ is a carboxy group with an appropriate amine to form a further compound of the Formula I wherein R¹⁴ is a carbamoyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl or heterocyclylcarbonylamino group;

- and when a pharmaceutically-acceptable salt of a quinoline derivative of the Formula I is required it may be obtained using a conventional procedure.

11. A pharmaceutical composition which comprises a quinoline derivative of the Formula I, or a pharmaceutically-acceptable salt thereof, according to claim 1 in association with a pharmaceutically-acceptable diluent or carrier.

12. A quinoline derivative of the Formula I, or a pharmaceutically-acceptable salt thereof, according to claim 1 for use in a method of the treatment of the human or animal body by therapy.

13. A quinoline derivative of the Formula I, or a pharmaceutically-acceptable salt thereof, according to claim 1 for use in the treatment of cancer.
14. The use of a quinoline derivative of the Formula I, or a pharmaceutically-acceptable
5 salt thereof, according to claim 1 in the manufacture of a medicament for use as an
anti-invasive agent in the containment and/or treatment of solid tumour disease.
15. The use of a quinoline derivative of the Formula I, or a pharmaceutically-acceptable
salt thereof, according to claim 1 in the manufacture of a medicament for use as an
10 anti-proliferative agent in the containment and/or treatment of solid tumour disease.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.